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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,426	10/28/2003	William L. Miller	14515.1US01	1164

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EXAMINER	
RAMPURIA, SATISH	
ART UNIT	**PAPER NUMBER**
2191	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/696,426	MILLER, WILLIAM L.	
	Examiner	Art Unit	
	Satish S. Rampuria	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/11/05, 6/7/05, 4/22/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the application filed on October 28, 2003.

2. Claims 1-36 are pending.

Information Disclosure Statement

3. An initialed and dated copy of Applicant's IDS form 1449 filed on 7/11/05, 6/7/05, and 4/22/05 is attached to the instant Office action.

Oath/Declaration

4. The Office acknowledges receipt of a properly signed oath/declaration filed 8/2/2004.

Specification

The disclosure is objected to because of the following informalities:

Appropriate correction is required.

5. The use of the trademark/service mark "Intel" has been noted in this application (i.e., page 9). It should be appropriate or proper term for details please visit http://www.intel.com/intel/legal/tmsymack2.htm (see MPEP 608.01(v)) used, wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

6. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (i.e., page 16). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Drawings

7. The drawings were received on October 28, 2003. These drawings are acceptable by the examiner.

Claim Objections

8. Claims 9-10 and 18-19 objected to because of the following informalities: the abbreviation "DRD" should be accompanied with its full form.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 29-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 29-36 is not limited to tangible embodiments. In view of Applicant's disclosure, specification pages 3 and 12, the medium is not

limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., computer readable storage medium) and intangible embodiments (e.g., transmission media, radio frequency (RF), infrared (IR), a carrier wave, telephone line, a signal, etc.). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

To overcome this type of 101 rejection the claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media. For the specification at the bottom, carrier medium and transmission media would be not statutory but storage media would be statutory.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1-3, 5-6, 8-13, 15-16, 18-24, 26-32, and 34-36 rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication No. 2006/0206856 to Breeden et al. (hereinafter, Breeden) in view of US Publication No. 2004/0006760 to Gove et al. (hereinafter, Gove).

Per claim 1:

Breeden disclose:

- A system for learning model-based lifecycle diagnostics, the system comprising:
- an integrated development environment having software tools linked within (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...");
- a run-time environment having agents that detect failures linked within (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed..."); and
- a bi-directional link between the integrated development environment and the run-time environment (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...").

Breeden does not explicitly disclose whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors.

However, Gove discloses in an analogous computer system whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors (Gove paragraph [0020] "After the performance data is collected by the IDE, then the

developer reviews the performance data and debugs the program (i.e., fixes execution problems of the program)...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of whereby the failures detected in the run-time environment are traced back to the integrated development environment to determine model errors as taught by Gove into the method of developing software in an integrated development environment and in run time environment as taught by Breeden. The modification would be obvious because of one of ordinary skill in the art would be motivated to detect the failures in the run time environment and trace back to the development to fix them to optimize the end process performance as suggested by Gove (paragraph [0010]).

Per claim 2:

The rejection of claim 1 is incorporated and further, Breeden disclose:

- wherein the integrated development environment includes requirements management tools, design tools, and implementation tools linked together (paragraph [0013] "...application development system that assists in the developing, debugging, testing, deploying, and running of web applications").

Per claim 3:

The rejection of claim 2 is incorporated and further, Breeden disclose:

- wherein the requirements management tools includes an object oriented requirements management tool and an issue-based information system requirements management tool (paragraph [0023] "design-time environment... allow... developer to develop JSP-based portal applications using a collection of... source editors").

Per claim 5:

The rejection of claim 2 is incorporated and further, Breeden disclose:

- wherein the implementation tools include a software function code generation, management, and deployment tool, and a software diagnostic code generation, management (paragraph [0013] "...application development system that assists in the developing, debugging, testing, deploying, and running of web applications").

Per claim 6:

The rejection of claim 1 is incorporated and further, Breeden disclose:

- wherein the run-time environment includes diagnostic agents (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...").

Per claim 8:

The rejection of claim 1 is incorporated and further, Breeden disclose:

- wherein the run-time environment includes a database, a server software tool, a broker, and diagnostic agents (paragraph [0062] "run time environment includes a Control container and Lifecycle driver... with the control factory...servlet container").

Per claim 9:

The rejection of claim 1 is incorporated and further, Breeden disclose:

- wherein the bi-directional link is a DRD link (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...").

Per claim 10:

The rejection of claim 9 is incorporated and further, Breeden disclose:

- wherein the DRD link includes a database (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...").

Per claim 11:

The rejection of claim 10 is incorporated and further, Breeden disclose:

- wherein the database is a distributed database (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...").

Claims 12-13, 15-16, 18-20 are the system claim corresponding to system claims 1, 3, 5-6, and 9-11 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1, 3, 5-6, and 9-11 respectively, above.

Per claims 21, 27 and 28:

Breeden disclose:

- A method of diagnosing model errors in a software environment including an integrated development environment and a run-time environment bi-directionally linked by a link (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)..."), the method comprising:
- detecting failures within the run-time environment (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...").

Breeden does not explicitly disclose tracing the failures back to the integrated development environment; and identifying the model errors in the integrated development environment based on the tracing of the failures.

However, Gove discloses in an analogous computer system tracing the failures back to the integrated development environment; and identifying the model errors in the integrated development environment based on the tracing of the failures (Gove paragraph [0020] "After the performance data is collected by

the IDE, then the developer reviews the performance data and debugs the program (i.e., fixes execution problems of the program)...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of tracing the failures back to the integrated development environment; and identifying the model errors in the integrated development environment based on the tracing of the failures as taught by Gove into the method of developing software in an integrated development environment and in run time environment as taught by Breeden. The modification would be obvious because of one of ordinary skill in the art would be motivated to detect the failures in the run time environment and trace back to the development to fix them to optimize the end process performance as suggested by Gove (paragraph [0010]).

Per claim 22:

The rejection of claim 21 is incorporated and further, Breeden disclose:

- wherein detecting failures includes using model-based diagnostic agents to detect failures within the run-time environment (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...").

Per claim 23:

The rejection of claim 22 is incorporated and further, Breeden disclose:

- further comprising determining root causes for known failure modes based on the failures detected by the model-based diagnostic agents (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...").

Per claim 24:

The rejection of claim 21 is incorporated and further, Breeden disclose:

- wherein detecting failures includes using learning model-based diagnostic agents to detect failures within the run-time environment (paragraph [0067] "Design time and Run time steps...perform a visual test or debug of the application. If everything is satisfactory the application is deployed...").

Per claim 26:

The rejection of claim 24 is incorporated and further, Breeden disclose:

- wherein tracing failures includes the diagnostic agents writing information into the link (paragraph [0020-0021] "...the IDE includes design components...developers can easily move or switch (as indicated by the bidirectional arrow)...").

Claims 29-32 and 34-36 are the system claim corresponding to method claims 21-24 and 26-27 respectively, and rejected under the same rational set forth in connection with the rejection of claims 21-24 and 26-27 respectively, above.

13. Claims 4, 7, 14, 25, and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Breeden in view of Gove and further in view of US Patent No. 6,167,353 to Kanesvsky et al. (hereinafter, Kanesvsky).

Per claim 4:

The rejection of claim 2 is incorporated and further, neither Breeden nor Gove explicitly disclose wherein the design tools include an object oriented model driven function design tool, a knowledge-based diagnostics design tool, and a model-based diagnostic design tool.

However, Kanesvsky discloses in an analogous computer system wherein the design tools include an object oriented model driven function design tool, a knowledge-based diagnostics design tool, and a model-based diagnostic design tool (col. 2, lines 29-40 "...model based diagnostic system...enables selection of components... response to indications").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of wherein the design tools include an object oriented model driven function design tool, a knowledge-based diagnostics design tool, and a model-based diagnostic design tool as taught by Kanesvsky into the combination system the method of developing software in an integrated development environment and in run time environment as taught by Breeden and Gove. The modification would be obvious because of one of ordinary skill in the art would be motivated to

have a model-based diagnostic design tool to provide an automated test tool as suggested by Kanesvsky (col. 2, lines 16-26).

Per claim 7:

The rejection of claim 6 is incorporated and further, neither Breeden nor Gove explicitly disclose wherein the diagnostic agents include model-based diagnostic agents and learning model-based diagnostic agents.

However, Kanevsky discloses in an analogous computer system wherein the diagnostic agents include model-based diagnostic agents and learning model-based diagnostic agents (col. 2, lines 29-40 "...model based diagnostic system...enables selection of components... response to indications").

The feature of wherein the diagnostic agents include model-based diagnostic agents and learning model-based diagnostic agent would be obvious for the reasons set forth in the rejection of claim 4.

Claims 14 are the system claim corresponding to system claim 4, and rejected under the same rational set forth in connection with the rejection of claim 4, above.

Claim 25 are the method claim corresponding to system claim 4, and rejected under the same rational set forth in connection with the rejection of claim 4, above.

Claim 33 are the computer program product claim corresponding to system claim 4, and rejected under the same rational set forth in connection with the rejection of claim 4, above.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Satish S. Rampuria** whose telephone number is **(571) 272-3732**. The examiner can normally be reached on **8:30 am to 5:00 pm** Monday to Friday except every other Friday and federal holidays. Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: 571-272-2100.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Wei Y. Zhen** can be reached on **(571) 272-3708**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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